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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Nixon Peabody LLP
200 Page Mill Road
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EXAMINER

BOR, HELENE CATHERINE

ART UNIT

PAPER NUMBER

3768

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/579,657	Applicant(s) CASULA ET AL.	
	Examiner HELENE BOR	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/14/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: "the emitting elements" lacks antecedent basis.
2. Claim 2-14 are objected to because of the following informalities: "Transducer according to claim..." is not proper grammar. It should read --A transducer--.
3. Claim 9 is objected to because of the following informalities: "fibre" is misspelled. It should read --fiber--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 14 claims, "multiple element", "an ultrasonic emitter", and "emitting element". The claim is unclear as to the relationship of these elements such as the emitting element being same as an ultrasonic emitter or different elements. Further is it unclear how the elements are adjustable and rigid: "means of bringing the elements into contact with the surface of an object" and "elements are rigid".
6. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Claim 12 claims "a blade" for distributing forces. The Examiner questions whether this translation is appropriate for the nature of the claims or if another term best describes the invention.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claim 1-6 & 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Bolomey et al. (US Patent No. 6,424,597).

Claim 1 & 13: Bolomey teaches an ultrasonic contact transducer with multiple elements, this transducer being characterised in that it comprises means of bringing the elements into contact with the surface of an object to be checked and means of determining the positions of the elements relative to the object, using the means of bringing the elements into contact, and in that each element is at least an ultrasonic emitter and the emitting elements are rigid and are assembled to each other mechanically so as to form an articulated structure (Col. 3, Line 24-38 & Claim 1 & 3).

Claim 2 & 14: Bolomey teaches a transducer, in which the transducer can be moved relative to the object to be checked and has a deformable emitting surface formed by first faces of the elements and that will be brought into contact with the surface of this object and starting from which ultrasounds are emitted towards the object, control means being provided to generate excitation pulses of the emitting elements, the

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determination means being designed to define positions of the ultrasound emitting elements relative to the object during displacement of the transducer, processing means being provided to determine, starting from the positions thus determined, delay laws that emitting elements use to generate a focused ultrasonic beam for which the characteristics are controlled with respect to the object, and apply these delay laws to the excitation pulses, ultrasound receiving elements, possibly composed of the emitting elements, being designed to supply signals used to form images related to the object, the means for bringing into contact being provided to bring the emitting elements into contact with the surface of the object and the determination means being provided to determine the positions of the emitting elements relative to the object through the means bringing the emitting elements into contact (Col. 27-46 & Claim 1 & 2).

Claim 3: Bolomey teaches a transducer, in which the means for bringing the emitting elements into contact with the surface of the object comprise mechanical elements, each mechanical element including a portion that is free to move relative to a rigid portion of the transducer, a first end of this moving portion being capable of pressing emitting elements into contact with the surface of the object, and the means of determining the positions of the emitting elements relative to the object comprise first means provided to determine the positions of the emitting elements relative to the rigid portion of the transducer, by measuring the deformation of the emitting surface, and to output signals representative of the positions thus determined, the first means comprising distance measurement means, provided to measure the distance between a second end of the moving portion of each mechanical element and an area of the rigid

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portion of the transducer and auxiliary processing means provided to determine the positions of the emitting elements with respect to the rigid portion of the transducer, using the distances thus determined, second means provided to determine the position and orientation of this rigid portion with respect to the object and to output signals representative of the position and the orientation thus determined and third means provided to output the positions of the emitting elements with respect to the object using signals output by the first and second means (Col. 4, Line 5-27, Figure 6, Element 56 & Claim 5).

Claim 4: Bolomey teaches a transducer, in which the first end of each moving portion is rounded (Figure 4, Element 16).

Claim 5 & 6: Bolomey teaches a transducer, in which the rigid portion of the transducer comprises parallel holes in which the moving portions are respectively free to slide, and each mechanical element also includes elastic means capable of separating the first end of the moving portion corresponding to this mechanical element, from the rigid portion (Figure 4, Element 6 & 56, Col. 9, Line 32-42 & Col. 10, Line 6-17).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bolomey et al. (US Patent No. 6,424,597) as applied to claim 1-6 & 12-14 above, and further in view of Bjorner et al. (US Patent No. 5,485,263).

Claim 7: Bolomey teaches a transducer, in which the distance measurement means are provided (Col. 7, Line 17-19). Bolomey teaches continuous and discontinuous measurements (Col. 7, Line 25-29 & Col. 8, Line 12-14). Bolomey teaches the measuring means being done by microwaves or ultrasound. Bolomey fails to teach the measuring occurring optically. However, Bjorner teaches that height measurements can be detected using optical means (Col. 6, Line 62-67 & Col. 7, Line 1-3) as an alternative expedient in the art of measuring distance/height. It would have been obvious to one of ordinary skill in the art to substitute the ultrasound system of Bolomey with an optical system as taught by Bjorner as an alternatively expedient in the art of distance/height measuring.

Double Patenting

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. Claim 1-2 & 13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over patented claim 1 & 3 of U.S. Patent No. 6,424,597. Although the conflicting claims are not identical, they are not patentably distinct from each other because pending claims 1-2 & 13 are merely broader than claims 1 & 3 of the co-pending claims. Therefore, it is "anticipated" since it would be obvious to make broader (*In re Goodman*).

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. US 4166395 A USPAT 19790904 10 Test head
holder in a test system carrier, preferably for ultrasonic test heads. Dannehl;
Gunther

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b. US 4437468 A USPAT 19840320 32 Ultrasound scanning system with semi-independent transducer array. Sorenson; Paul D. et al.

c. US 6578424 B1 USPAT 20030617 9 Hand-held variable angle membrane (VAM) ultrasonic scanning head for the noninvasive detection of corrosion, MIC and foreign objects in pipes. Ziola; Steven M. et al.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE BOR whose telephone number is (571)272-2947. The examiner can normally be reached on M-T 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B./
Examiner, Art Unit 3768

/Eric F Winakur/
Primary Examiner, Art Unit 3768